

NEW SPECIES AND SUB-SPECIES OF GEOMETRIDAE.

By LOUIS B. PROUT.

SUBFAM. STERRHINAE.

1. *Anisodes* (*Perixera*) *pictimaculis* sp.n.

♂♀, 28 mm. Face brown above, whitish below. Palpus with third joint in ♂ rather long, in ♀ longer, almost as long as diameter of eye; pale, marked on upperside with dull red. Head, body and legs concolorous with wings, a red line on occiput, the foreleg reddened on upper- and innerside. Hindfemur with the ♂ sexual tufting predominantly dark purple-red.

Forewing not broad, apex moderate, termen waved; areole small, far proximal to end of cell; whitish, with irregular fleshy suffusions and scattered, somewhat darker irroration; cell-spot small, but more than a point, orange-buff (or perhaps 14d in Ridgway's scheme, *Color Standards*, pl. iii); antemedian line weak, indicated by vein-dots; median shade rather weak, fleshy, anteriorly far beyond the cell-spot, with outward angles at R¹ and R³ and inbent between them, behind R³ strongly oblique inward, slightly incurved and sinuous, reaching hindmargin about middle; postmedian formed of conspicuous vein-dots, deep fleshy, touched with black, the dot on R² markedly displaced proximally (2.5 or 3 mm. from termen), the rest of the series describing a gentle curve, the dot at R³ nearest to the termen; subterminal shades rather indefinite; terminal dots rather sharp, deep fleshy touched with black.—*Hindwing* with termen rather strongly crenulate; concolorous with forewing and similarly marked, the cell-spot slightly larger, of the same bright colour, the median shade nearer beyond it.

Underside whitish, the forewing with an ample pink shade occupying the cell and extending in front of it (to costa), outside it (to position of median shade) and a little behind it; both wings with zigzag pink postmedian line (finer and weaker on hindwing), which is anteriorly faintly double or at least forms two elongate spots at costa; terminal dots small and pink, on hindwing ill-developed.

Java: Pengalengan, Preanger, type ♂ in coll. Tring Mus. Also known to me, chiefly in the ♀ sex, from Ceylon, the Malay Peninsula and Borneo.

The colours are almost those of *A. flavispila* (Warr., Nov. Zool. iii. 312), which is a larger, broad-winged species, with the cell-spot orange-buff on the hindwing only, there larger.

SUBFAM. LARENTIINAE.

2. *Orthonama dicymanta* sp.n.

♂♀, 22–26 mm. Palpus at least as heavily scaled as in *vinosata* Prout (1910).

Forewing shaped nearly as in the ♂ of *vinosata* Prout or of *cortezia* Dogn. (1896), the distal margin being straightish and rather strongly oblique; apex, in the ♂, slightly more acute still than in the species cited; general coloration approximately as in the reddest-banded forms of *olivacea* Warr. (1900) = *cincta* Schaus (1901), but considerably more uniform, the more orange-brown proximal

area and costal streak not very sharply differentiated, a narrow distal border whitish mixed; sub-basal, antemedian and postmedian lines very weak, not edged with white, except perhaps at costal margin; two extremely slender, deeply lunulate-dentate whitish subterminal lines, very conspicuous under the lens (similar to the single line of *olivacea* but with profounder teeth, directed proximad on the veins), parallel except anteriorly, where the proximal one curves slightly inward; terminal black line slender, broken into short dashes which are separated by, and very narrowly bordered with, white scaling; fringe as in *olivacea*.—*Hindwing* a little broader than in most of the group, the sinuosities of the termen extremely weak; both sexes broadly whitish costally and apically, much as in the ♂ of *olivacea*; posterior part nearly as in *olivacea*, but a little more blurred.

Underside, especially in the ♀, more reddish and weakly marked than in *olivacea*.

E. Ecuador: Baeza, March 1915, a pair in coll. Tring Mus., type. Colombia: Pacho, E. Cordillera, 2,200 m. (A. H. Fassl), 1 ♂ in coll. Joicey.

3. *Erebochlora orbisticta cacotrocha* subsp.n.

♂, 62 mm. Nearest to *O. subtermaculata* Dogn. (1911, Cerro de Pasco dist.: Huancabamba and Oxapampa) in size¹ and markings. Distinguished from both the hitherto known races by the reduction of the whitish costal patch of the hindwing, which occupies much less than one-third of the wing-length, its greatest length being 6.5 mm. (in *O. subtermaculata* 8 to 10 mm.), and is moreover irregularly rotund instead of regularly oval, its contour indented at several points, especially at R², R³ and M¹ distally. The pale markings of *O. subtermaculata* on forewing beneath present, but narrowed.

S.E. Peru: Oconeqe, Carabaya, 7,000 ft., dry season, July 1904 (G. Ocken-den), type in coll. Tring Museum, February 1905, paratype in coll. Joicey.

4. *Eudule pyristacta* sp.n.

♂, 22 mm. Head and thorax black, patagia and tegulae marked with orange. (Abdomen lost.) Legs dark, marked with whitish.

Forewing broad, about as in *E. phlaearia* (Stgr., 1894, *Polygonma*), to which it is probably related; opaque, bright deep rufous, with black markings; short basal streaks at both margins; antemedian, median and postmedian rows of rather large spots, confluent and somewhat oblique outward anteriorly, well separate posteriorly, the isolated antemedian and median ones of submedian area (between M and SM²) about as far from termen as those in cell, the first two postmedian (in cellules 3 and 2) elongate, especially the second, reaching almost to the base of their respective cellules and ending about as near the termen as the last of the confluent ones and the small one in cellule 1b, which touches the distal end of a narrow, somewhat interrupted hind-marginal streak; terminal band much narrower than that of *phlaearia*, at apex about 2 mm., enclosing a spot of the ground-colour, mostly about 1 mm., cut nearly to the termen by broad projections of the ground-colour on the veins; fringe black, in part slightly greyer.—*Hindwing* concolorous, the black border narrow and fairly regular, but broadening along distal part of costa and joining the postmedian; a black spot at base; a longitudinal streak occupying most of cell; a second along fold,

¹ Dognin's measurements are always from tip to tip in a well-set specimen.

reaching the postmedian : a narrow one along abdominal margin ; postmedian, as far as M² analogous to that of forewing, its constituents rather narrower.

Underside slightly more orange, with the same markings.

Peru : Oxapampa, type in coll. Tring Mus.

5. *Psaliodes vernifera* sp.n.

♂♀, 17-19 mm. Head green, the palpus with a broad, tapering red-brown stripe on outside. Thorax above predominantly green, abdomen (except at base) deep vinaceous grey ; body beneath, with coxae and femora, mottled with these two colours and whitish ; abdomen without pencils.

Forewing with apex minutely produced, termen sinuous, subcrenulate, strongly oblique ; areole double ; glossy green (lime green of Ridgway), the markings deep vinaceous grey and pure white, their edging finely red-brown ; basal patch irregular, chiefly costal ; antemedian band slender, wavy-margined, a little broadened at ends, very strongly excurved in cell ; median band mostly narrow, especially in ♂, at costa broadened and enclosing some green dots, between the radials throwing out a strong projection distally (which in the ♀ reaches the outer white lunule), just outside DC (which is close to its proximal edge) enclosing a green spot ; ill-defined apical and tornal spots, the former enclosing some green scaling, the white markings indicate the boundaries of the true median area (as shown in the *picta* and *miniata* groups and many other *Psaliodes*) and are placed and formed nearly as in *electa* Schaus (1912), or—in the more distal position of the outer radial lunule—in *fuscata* Warr. (1904) = *cupreipennis* Dogn. (1914), the antemedian ones rather broad and well isolated, the postmedian ones shallowly lunulate, their slender dark edgings confined to the median area ; terminal line fine, developing on the teeth at vein-ends into blackish spots which extend on to the green fringe.—*Hindwing* with termen sinuous and subcrenulate ; DC³ vertical or slightly oblique *inward*, R² scarcely behind middle ; whitish at base, otherwise suffused with pale vinaceous drab ; a minute dark cell-dot and a faint pale crenulate postmedian line : terminal line browner ; fringe pale yellowish green.

Forewing beneath reproducing the pattern of upperside but much more blurred. Hindwing green, partly suffused with reddish brown and with a postmedian band of that tone and a fainter (more vinaceous grey) terminal one ; cell-dot blackish.

Jamaica : Newcastle, a pair, the type ♂ dated September 1893 ; also a ♀ without more exact location. All in coll. Tring Mus.

Mr. Warren labelled the ♂ "*detractata* Walk.," the ♀♀ " ? *effrenata* Walk.," I cannot find that it has ever been named.

6. *Collix praetenta* sp.n.

♂♀, 32-40 mm. Larger and rather paler than *ghosha* Walk. (*List Lep. Ins.* xxiv. 1249), antenna of ♂ less laterally compressed. Wings with the wood-brown ground-colour slightly tinged with fawn or purplish and with the dark irroration extremely fine, the darkest specimens extremely similar on the upperside to average *hypospilata* Guen. (1858).

Forewing sharply marked ; cell-spot large and nearly round (as in *hypospilata*) ; costal spots at origin of lines always more or less large, notably the distal post-

median.—*Hindwing* with little to distinguish it from the allies ; the subterminal line less interrupted, generally lunulate-dentate rather than broken into short dashes, never punctiform.

Underside intermediate between those of *ghosha* and *hypospilata*, almost exactly as in the African *foraminata* Guen., the strong longitudinal streaking of *ghosha* faintly or scarcely indicated, the postmedian and subterminal lines or bands both macular, with the spots large and subconfluent, the postmedian series not so elongate as in *ghosha*.

Assam, E. Pegu, the Malay Peninsula and Formosa, the type ♂ from Cherrapunji, February 1894, in coll. Tring Mus.

Mr. Warren generally determined this as *hypospilata*, on one occasion as *foraminata*. I have remarked on it in *Journ. Bomb. Nat. Hist. Soc.* xxxi. 313, no. 103.

7. *Collix leuciota* sp.n.

♂♀, 36–40 mm. Nearest to *praetenta* (*supra*) but darker and much more weakly marked, with a gloss that somewhat recalls that of *stellata* Warr. (*Nor. Zool.* i. 679), though less pronounced.

Forewing with cell-spot generally a little less rounded than in *praetenta*, with a slight and narrow projection on its anterior side ; markings not noticeably strengthened at costa.—*Hindwing* differing chiefly from those of *praetenta*, *ghosha* and *hypospilata* in that the cell-dot, instead of being very faintly and narrowly surrounded with whitish, has some snow-white scaling at its outer and posterior edges only.

Underside pale, with the postmedian line almost as in *hypospilata*, i.e. continuous and not broad, the subterminal, as in *praetenta*, macular, subconfluent and blackish, very different from that of *hypospilata*, in which it is deeper black, with its component spots or dots well separated.

Sikkim : the type ♀ from Darjiling (Pilcher) in coll. Tring Mus. ; a pair ex coll. Elwes in the same collection ; also a ♂ from Gunong Ijau, Malay Peninsula (coll. Tring Mus.) and a worn one “ Perak, 2,000–2,500 [feet], W. Doherty ” (coll. Joicey).

As the ♂ from Elwes has lost its locality label, though it will certainly be from Sikkim, and the Malayan examples may represent a separable race, I have chosen as type the ♀ with the most exact data.

8. *Collix rufidorsata* sp.n.

♂♀, 28–32 mm. Size of large *ghosha* Walk. Antenna of ♂ lamellate with long teeth beneath. Abdomen in both sexes with orange-brown subdorsal streak scarcely so bright as that of the *stellata* group (*stellata* Warr. 1894, *griseipalpis* Wileman 1916, *rufipalpis* Hmps. 1907, *purpurilata* Prout 1925), but longer, in addition with a similar tinge on the mediodorsal ridge, the intervening stripe blackish, generally more or less macular.

Upperside coloured and marked nearly as in *praetenta* Prout (*supra*), though with the cell-spot scarcely so large and round. Underside with the longitudinal streaks on M and its branches and on SM² almost as strongly developed as in *ghosha*.

W. Java : 1892, type ♂, Sukabumi, 2,000 ft., 1893 (H. Fruhstorfer), allotype ♀, both in coll. Tring Mus. Assam ; Sarawak ; Sula Islands ; New Guinea,

coastal regions; probably some separable races, but mostly single specimens. The species was formerly confounded with *ghosha*, but Warren furnished it with the manuscript name which I have adopted.

9. *Collix rufidorsata promulgata* subsp.n.

♂♀, 25-32 mm. Darker and more tinged above with reddish or purplish than in the name-typical form (*supra*), in aspect somewhat less banded, on account of the more equal expression of the lines, in particular the good development of the punctiform one which bisects the pale postmedian band; basal region of forewing anteriorly nearly always well reddened.

Manus, Admiralty Islands, September-October 1913 (Meek's Expedition), 4 ♂♂, 3 ♀♀ in coll. Tring Mus. Similar forms are distributed in the Bismarek Archipelago.

10. *Collix stenoplia* sp.n.

♂♀, 38-40 mm. Palpus elongate, bright ochreous. Antenna in ♂ pectinate to near apex, the branches moderate (3 or 4). Head and body concolorous with wings, or the body somewhat paler beneath; abdomen on first three segments with a bright ochreous lateral stripe (near the lower edge of the dark dorsal area). Midtibia of ♂ not dilated. Abdomen of ♂ rather long.

Forewing brown, with strong purple-drab reflections; cell-mark large, finely white bounded, its proximal edge indented near the anterior, narrower end; dark lines rather thick, but very weak, normal for the genus; subterminal white, punctiform.—*Hindwing* concolorous, rather more noticeably white-dotted on the veins, especially at the postmedian line; cell-dot white; subterminal dots as on forewing.

Underside weakly marked for a *Collix*, without longitudinal dark streaks; cell-spot of forewing smaller than above, of hindwing here similar to that of forewing; postmedian and subterminal bands present, the postmedian not macular, nearly as in *hypospilata* Guen. or with a slightly stronger and more regular outward curve, the subterminal still weaker, but continuous, not definitely macular, with a slight suggestion of pale interneural spots or lunules at its outer side.

Selangor: Bukit Kutu, 3,450 ft., at light, 13 and 14 April 1926 (H. M. Pendlebury), type ♂ in coll. Brit. Mus., presented by the Federated Malay States Museums, allotype ♀ in their collection.

Forms a new section of the genus by the ♂ characters, otherwise very similar to *rufipalpis* Hmps., rather smaller, purpler, postmedian of both wings rather less bulged.

11. *Sauris septa* sp.n.

♂♀, 26-30 mm. Structure group of *proboscidea* Walk. 1862 (*Holorista* Warr.). Palpus not quite so long as in that species, the concavity on upperside of antenna at about one-third slightly more noticeable. Hindtibia of ♂ with fringing of hair on underside triangular as in *proboscidea*, but rather stronger, continuing to end.

Forewing superficially like that of *abnormis* Moore (1888) rather than *proboscidea*, the purple-grey distal border being strong, the olive-fuscous line which bounds it proximally complete and preceded proximally by a second, more macular line of the same fuscous colour from R¹ to near tornus; ground-colour

grape-green, generally a little duller (more suggesting deep grape-green) proximally to the postmedian band than distally; sub-basal line slender; antemedian rather more oblique than in *proboscidea*, less zigzag, its indentation at fold shallow instead of V-shaped; the triple postmedian less equally developed than in *proboscidea*; the other lines only indicated in slightly deepened grape-green; cell-dot obsolete.—*Hindwing* and underside nearly as in *proboscidea*, the hindwing beneath with rather more copious specialized scaling in posterior half.

New Ireland, November–December 1923 (A. F. Eichhorn), 5 ♂♂, 1 ♀, in coll. Tring Mus. The ♀, but for its more complete postmedian band, might easily be confused with that of *S. abnormis nitidula* Warr. (1899), which has been received from the Bismareks.

12. *Hydrelia candace* sp.n.

♂♀, 26–29 mm. Near to *H. argyridia* (Butl. 1894), especially to the ♀, even the freshest ♂♂ being considerably less dark than the ♂ of *argyridia*.

Forewing in both sexes at least as broad as in the ♀ of *argyridia*, perhaps slightly broader, the apex minutely produced, the termen, except near apex, rather markedly convex; median band (as also in *argyridia*) variably shaped distally, but in general with much less pronounced lobe or prong at R²–M¹, the white band beyond it always narrow; lunulate or submacular whitish subterminal line always developed (as only in occasional ♀ aberrations of *argyridia*).—*Hindwing* with the median band broader and less sharply angulated than that of *argyridia*, generally less conspicuous, the ground-colour being less pure white; white bands beyond narrower than in *argyridia* (generally twice as narrow), distal area broader, with suggestion of two macular subterminal pale lines, the proximal the stronger; this wing altogether more reminiscent of some pale forms of *inutilis* Warr. (1901) than of *argyridia*.

Abyssinia: Adis Abeba, June and July 1926 (Gajdacs), 9 ♂♂, 1 ♀, in coll. Tring Mus., the ♀ and some of the ♂♂ very worn. A ♀, equally worn, was taken at the same place by O. Neumann on March 22, 1925, and is also in Mus. Tring.

SUBFAM. GEOMETRINAE.

13. *Ischnopterix choritis* sp.n.

♂, 49 mm. Near *fabiana* Stoll (*Uitl. Kapell.* iv. 227, t. ccxcvii, f. H), perhaps a race. Wings slightly less narrow.—*Forewing* with termen more strongly convex; the whitish parts more mixed with green, hence less outstanding; median band appreciably more proximal than in the specimen of *fabiana* before me (in which latter it touches the cell-mark), at fold markedly indented, a black mark which accompanies it proximally forming a pronounced V.—*Hindwing* with the median line more sinuous than in *fabiana*.

S.E. Peru: Rio Huacamayo, Carabaya, 3,100 feet, June 1904 (G. Oekenden), type in coll. Tring Mus.

Stoll's figure of *fabiana* is rather crude, much too broad-winged, not green enough, nor with the reddish shade proximally to the posterior half of the subterminal sufficiently brought out, but with the rest of the markings pretty correct, except that the costal white mark which adjoins the pale apical patch is in reality acutely angled outward in front of SC⁵. That species seems rare; the Tring Museum has a single ♂ from St. Jean de Maroni.

14. *Isechnopterix ochroprosthia* sp.n.

♂, 42–48 mm. Frons with the prominence long, a blackish stripe down the sloping upperside, the rest pale. Palpus rather under 2, heavily scaled, mostly pale. Vertex blackish except at sides. Antenna not extremely long. Body very pale wood-colour, copiously mixed with fuscous above, producing a somewhat olivaceous tone, the first few segments of abdomen warmer brown; abdomen extremely long and slender, about as in *chryses* Druce (1892). Legs, especially the foreleg, dark mixed; hindtibia not extremely dilated, the hair-pencil present.

Forewing long and narrow, slightly more so than in *chryses*; retinaculum somewhat enlarged; stalk of SC¹⁺² well separated from C; predominant colour a blend of dark purple-grey and red-brown; a broad (circ. 1.5 mm.) costal streak cream-buff, only dark-dotted at costal edge, finely underlined with black; a narrower and less well defined streak of the same colour from termen at R², running proximad and slightly forward for a length of 4 or 5 mm.; a still less well defined, quadrate pale patch from about middle of hindmargin to beyond $\frac{4}{5}$, separated from an incomplete pale subterminal by a narrow band of the red-brown colour; cell-mark black, slightly elongate; a very narrow black mark from base of costal streak to hindmargin at $\frac{1}{4}$ or $\frac{1}{5}$; faint indications of dark median shade and zigzag line beyond it, but proximal to the cell-mark; termen with blackish lunules; fringe pale-mixed.—*Hindwing* rather pale, with fleshy suffusion, about as in the ♀ of *rostellaria* Feld. or both sexes of *callistrepta* Prout (1928); cell-spot dark grey, moderately large; postmedian line slightly darkened on the veins, between R² and fold incurved, behind the fold faint; a faint, dusky, macular subterminal band; terminal lunules constricted in middle, slightly suggesting paired dots.

Forewing beneath less contrasted, the pale parts nearly as above, the rest less dark; cell-spot and terminal markings fairly strong. Hindwing more ivory-yellow than above, only fleshy mixed about the subterminal band; moderate grey irroration; cell-spot strong, blackish, other markings slight.

Iguassu, Parana, 2 ♂♂, the type dated October 26, 1921; both in coll. Tring Mus.; also a damaged ♂ from Buenavista, E. Bolivia, July–October 1906 (J. Steinbach), in the same collection.

105. *Biston regalis pelidna* subsp.n.

♂, 63 mm. Black lines thinner than in *r. regalis* Moore (1888) from N. India, the brown band proximally to the antemedian narrow, the median shade broad and strong (rather dark grey), more distally placed, postmedian line of forewing also rather distal, terminal area of both wings more clouded with brown, the white midterminal spot wanting.

W. Java: Mt. Gedé, 4,000 ft., 1896 (H. Fruhstorfer), type in coll. Tring Mus.

16. *Epimecis amianta* sp.n.

♂, 56–64 mm. Very near *subalbida* Warr. (1900), both in appearance and structure. Termen of hindwing less deeply crenulate. Ground-colour clearer white, the dark irroration much less dense.—*Forewing* with antemedian line rather more distal, close to the base of M², much straighter except for the anterior angulations; cell-mark generally more elongate; postmedian thicker, distinct throughout, less oblique anteriorly, scarcely oblique between the radials, with a

supplementary tooth on R^2 , rather less oblique inward behind R^3 ; subterminal less regular, the lunule behind R^3 developed into an oval white spot, that behind M^1 with a sharper blackish spot proximally.—*Hindwing* with median shade less incurred anteriorly than in *subalbida*, postmedian thicker, subterminal lunules shallower.—Underside with borders as in *subalbida*, the lines showing the same distinctions as above.

Amazons: Calama, Rio Madeira, below Rio Machados, August–October 1907 (W. Hoffmanns), type; Fonte Boa, May 1906 (S. M. Klages), a small ♂ taken together with *subalbida*. British Guiana: Potaro, February 1908 (S. M. Klages), 1 ♂. All in coll. Tring Mus. Also known to me from Matto Grosso and Bolivia.

17. *Cleora alienaria fumipennis* subsp.n.

"*Boarmia acaciaria* Bdv. form *carriaria* Guen." Hmps. in *Monogr. Christmas Island*, p. 70 (1900). *Chogada fumipennis* Warr. MS. in coll. Tring Mus.

♂♀, 30–38 mm. Smaller than *a. alienaria* Walk. (= *gelidaria* Walk.). Antenna of ♂ pectinated appreciably further. Hindtibia of ♂ almost 7 mm. long, tarsus less than 3 mm.—*Forewing* rather more pointed than in *a. alienaria*, the white parts always with a definite suffusion of yellow or brown, the dark markings heavy.—*Hindwing* with the white cell-dot generally rounded, without the posterior extension; pale band between postmedian and subterminal generally strongly developed.—Underside suffused with glossy brown, postmedian line rather strong, on hindwing sharply angled in middle; dark borders heavy.

Christmas Island: Ross Hill; Murray Hill; Flying-Fish Cove; N. part of Island; E. coast; type from Ross Hill in coll. Brit. Mus.

18. *Cleora pendleburyi* sp.n.

♂, 46–50 mm. Closely similar to *determinata* Walk. (1860), with which I formerly confused it. On an average less large. Abundantly distinct in the genitalia: valve broader in centre, the armature (including the harpe of Pierce) quite different, the strong spine (which is common to both) much more strongly curved, etc., the whole structure indicating a possible race of *illustraria* Walk. (1862), though *pendleburyi* is longer-winged, less sharply marked, with abdominal belt weaker, underside more blurred.

Forewing with the markings appreciably less heavy and coarse than those of *determinata*, more recalling *fraterna* Moore (1888); cell-mark narrowed, nearly as in the latter, without such a large proximal projection or accessory spot as in *determinata*; median line generally weak or obsolete; brown band outside the postmedian less developed or narrower.—*Hindwing* with similar toning down of the markings, the band outside the postmedian narrowed and not spotted with blackish.

Underside with the dark borders less extremely broad and heavy than in *determinata*, particularly on the hindwing, where in *determinata* it absorbs and obliterates the postmedian line and commonly even the cell-spot, whereas in *pendleburyi* it begins to pale before reaching the postmedian, which stands out thick and strong in an appreciably more blackish brown.

Selangor: Bukit Kutu, circ. 3,500 ft., a good series; the type, taken at light, April 16, 1926 (H. M. Pendlebury) presented to the British Museum. Also from Kedah Peak, 3,200 ft. and Gunong Angsi, Negri Sembilan, 2,000–2,700 ft. (Raffles

Museum). Except on Kedah Peak it was accompanied by *determinata*. Perak, Borneo and S.W. Sumatra also yield this species; from the slopes of Korintji the Pratt brothers sent a fine series.

The ♀ apparently differs from that of *determinata* in similar ways as regards reduction of cell-spot on forewing above and of both borders beneath, but, curiously, the median line is well developed in *pendleburgi*, nearly obsolete in *determinata*.

19. *Cleora illustraria aequivoca* subsp.n.

♂♀, 42–48 mm. Structure of *illustraria* Walk. (1862) and *anestiaria* Swinh. (1915) including the genitalia, so that it is safe to assume that all three are races of a single species. Very distinct in showing the dusky coloration of *injectaria* Walk. (1860), only in one ♀ with some white admixture remaining in the basal and median areas, the incomplete line between postmedian and subterminal and small apical and midterminal spots beneath, besides the base of abdomen above. —Forewing dark greyish brown, with a slaty tinge and with some black irroration; the brown bands which bound the median area indicated, with some ochreous scaling on the veins.—Hindwing similarly darkened, proximal area scarcely paler than median. cell-dot small or subobsolete, its black circumscription strong.—Underside also darkened, especially in the ♂.

Vulcan Island, November 1913–January 1914 (Meek's Expedition). 2 ♂♂, 2 ♀♀ in coll. Tring Mus. (types), further examples in the Oberthür and Joicey collections.

Other races of *illustraria*, closely similar to *i. anestiaria*, but apparently separable, occur on New Ireland and New Britain, but I have seen too few examples to be able to differentiate them with confidence; the New Guinea race *anestiaria* is very variable, but regularly more sharply variegated than the name-typical *illustraria* of Queensland.

20. *Cleora injectaria dobboensis* subsp.n.

♂, 44–46 mm. Rather larger and fuller-winged than the ♂♂ of the other races. Abdomen and median area of both wings above and beneath a good deal marked with white or whitish, as in some ♂ examples of the small, narrow, blackish Rossel Island race *vittata* Warr. (1899); cell-marks with the black circumscription strong; median line not very black, the streak which in many of the forms runs from it to or towards midtermen not developed; postmedian of forewing as strongly dentate posteriorly as in *i. vittata*.

Aru Islands: Dobbo, March 1897 (Doherty), 3 ♂♂ in coll. Tring Mus.

C. injectaria Walk. (1860) = *compactaria* Walk (1862) is one of the most widely distributed species of the group; a melanic race from Engano has been named *fuliginosa* Warr. (1894); some interesting island forms are—as with *illustraria*—still insufficiently known.

21. *Cleora munditibia* sp.n.

♂♀, 40–44 mm. Very similar to *nausori* B.-Bak. (1905). Hindtibia in both sexes pale, without the smoky mottlings which are always conspicuous on its outside in that species. Colouring less tinged with ochreous than in *nausori*; the white cell-marks, especially on forewing, more diffuse, less clearly expressed, without such sharp blackish dashes distally; the lines not accompanied by

conspicuous band-like shades.—*Forewing* with antemedian more strongly ex-curved in cell, postmedian generally more inbent in front of the outward bend at R^1 ; subterminal with similar proximal dark maculation at the radials, but with the distal maculation at the same position weaker, not (as in *nausori*) spreading forward to SC^2 .—Underside with less cloudings than in *nausori* but—at least on hindwing—with more definite demarcation between the dusky sub-marginal shading and the nearly clear marginal band.

Fiji: Obalau I. (R. Baxendale), 4 ♂♂, 5 ♀♀ in coll. Brit. Mus., ex coll. Bethune-Baker, including ♂ type and ♀ allotype; Nasoua, 1 ♂, 1 ♀, from the same source; Viti Levu (Woodford), 3 ♂♂ in coll. Joicey; Ba River (Woodford), 1 ♂ in coll. Tring Mus.; Labasa, dwarfed ♀♀ bred from larvae found feeding on leaves of *Mucuna aterrima* Holland (W. Greenwood).

Bethune-Baker (*Proc. Zool. Soc. Lond.* 1905, p. 94) mentions this species as an ab., “uniformly paler,” of *vitensis* B.-Bak., but the genitalia are of a quite different type and that species has the underside much more as in the *illustraria* group, besides several other differences. The valve of *munditibia* is furnished with short curved proximal spines instead of a single long spine as in *nausori*.

Zeuctocleora gen.n.

Face slightly rounded, with appressed scales. Palpus rather short; second joint with close, compact scaling, third joint short, concealed. Tongue short. Antenna in ♂ pectinate, in ♀ subpectinate, in both sexes with apical part merely ciliated. Pectus slightly hairy. Femora not hairy. Hindtibia in ♂ dilated, with hair-pencil; abdominal spine vestigial or wanting. Frenulum fully developed.—*Forewing* in ♂ rather narrow, in ♀ broader, termen oblique, gently curved, scarcely waved; fovea in ♂ large; cell half; SC^1 free or anastomosing slightly with C, SC^2 from stalk of SC^{3-5} , R^2 slightly before middle of DC, M^1 well separate.—*Hindwing* with costa slightly elongate, termen moderately rounded, waved, scarcely crenulate; cell nearly half, DC slender; C curving, appressed to cell—commonly even anastomosing—towards middle, then rapidly diverging, R^1 separate, R^2 wanting, M^1 separate.

Type of the genus: *Zeuctocleora una* sp.n.

Probably a development of the *proëmia* group of *Cleora*, but distinct in the stalking of SC^2 of the forewing, the peculiar curve of C of the hindwing, etc.

22. *Zeuctocleora una* sp.n.

♂, 25–28 mm.; ♀, 29–31 mm. Face blackish, narrowly pale below; palpus black. Head and body brown, much clouded with black. Legs, especially the foreleg, black mixed, leaving the ends of the tibial and tarsal joints conspicuously pale.

Forewing bright brown, mottled of two or three shades (more yellowish, reddish and purplish) and irrorated with black, in a few ♂♂ and most ♀♀ heavily clouded with black, in which case the costal area generally remains conspicuously less blackened; cell-dot indistinct; lines black, rarely very distinct throughout; antemedian acutely angled outward in cell, accentuated on M (just proximal to M^2), ex-curved between this and SM^2 ; median thickened at costa, considerably nearer to post- than to antemedian, zigzag, rather variable, sometimes blurred; postmedian nearly parallel with termen in anterior half, then slightly incurved,

with a slight tooth outward at SM^2 ; deeper black marks on this line at R^1 , R^3 and M^1 , pointing inward, developed in the ♂; a fine pale distal edging to the line noticeable, at least at costa; subterminal line weak to nearly obsolete, but always developing a whitish spot (variable in size) at and behind R^3 , often succeeded by a pale mark along R^3 to termen; terminal line crenulate, enclosing small whitish vein-dots; fringe marked with blackish opposite the veins.—*Hindwing* with a straightish median shade and a minutely crenulate postmedian line, the latter angled at R^3 and slightly sinuate inward between M^2 and SM^2 , the two somewhat convergent posteriorly; a fine pale distal edging to the postmedian; subterminal chiefly indicated by a dusky proximal shade, no enlarged pale spot at R^3 ; terminal line and fringe as on forewing.

Underside pale, with strong dark-grey irroration and clouding; costal margins more buff, on forewing with fine blackish strigulae; no distinct markings, the postmedian generally indicated, at least costally; fringe spotted opposite the veins.

N.E. Madagascar: Diego Suarez, February–September 1917; Sakaramy, February 1917 (G. Melou), a long series in coll. Tring Mus.

23. *Catoria tamsi* sp.n.

♂, 45 mm. Head and body concolorous with wings, the face and upperside of palpus blackish, abdomen with some dark subdorsal spots. Hindtibial dilation not extreme.

Forewing with the long stalk of SC^{1+2} generally arising from the stalk of SC^{3+5} near its base (as in normal *sublavaria* Guen.) and anastomosing with C; white with rather strong brown irroration, nearest in effect to strongly dusted *camelaria* Guen., but a little darker, the irroration having a slightly more olive-tinged setting; markings as in *camelaria*, slightly heavier than in any but extreme aberrations of that species; costal spot at commencement of postmedian line subquadrate, about 1 mm. in diameter, succeeded by a second slightly less broad, rather nearer to it than to the subterminal.—*Hindwing* with markings similarly heavier than in normal *camelaria*, the median line somewhat thickened in the cell, the outer postmedian, thick between SC^2 and R^3 ; cell-mark long-oval, filled in with black, as in rare aberrations of *camelaria*.

Underside almost exactly as in rather strongly suffused examples of *sublavaria* Guen.; forewing with two subquadrate dark costal postmedian spots, corresponding to those of upperside; terminal white spot behind R^3 smaller than white apical patch.

Perak: Batang Padang, Jor Camp, 1,800 ft., May 31, 1923 (H. M. Pendlebury), type in coll. Brit. Mus., presented by the Federated Malay States Museum; Mt. Tahan (Waterstradt), a ♂ in coll. Tring Mus. Sumatra: Lebong Tandai (C. J. Brooks), a ♂ in coll. Joicey, with stalk of SC^{1+2} arising from the cell.

I am indebted to Mr. W. H. T. Tams for kindly investigating, on British Museum material, the ♂ genitalia of the representatives of the principal *Catoria* forms belonging to the present group, including a Singapore specimen of the new species. The results are very interesting, as the shape and especially the armature of the valves show very wide differences as between species and species. *C. olivescens* Moore (which Hampson, *Faun. Ind., Moths* iii. 370, made a "form" of *sublavaria*, though he has never been followed in this) is so similar in structure

to *camelaria* that Mr. Tams would regard it as a race thereof in spite of the wide superficial divergence; *sublararia* Guen., *hemiprosopa* Turn. (with subspecies *affinis* Prout) and the new species are all totally different from *camelaria* and from one another.

24. *Diplurodes inundata* sp.n.

♂♀, 28–30 mm. Face white, mixed with brown. Palpus with second joint very broadly scaled, third joint very small; predominantly brown. Vertex whitish. Antenna of ♂ with the ciliation over 2. Thorax and abdomen whitish, mixed—especially above—with brown or fuscous; lateral tufts of ♂ moderately strong. Hindtibia of ♂ not dilated.

Forewing broad, apex appreciably more rounded than in the nearest allies (*decursaria* Walk. 1862, *vestita* Warr. 1896, etc.); fovea strong; median area white, with little irroration; cell-mark black, narrow, a little elongate; proximal and distal areas pale quaker-drab or mouse-grey, clouded with brown; lines blackish; antemedian from costa just beyond 3 mm., excurved, but with a slight inward sinus behind; postmedian arising about 5 mm. from apex, slightly intensified at costa and on veins, with moderate projections outward behind R¹ and behind M¹ (slightly variable); a brown median line, arising from a blacker costal spot near the cell-mark, oblique outward from R¹, describing an irregular outward sinus, slightly angled inward between bases of R³ and M¹, a second sinus touching the postmedian at M²; markings of distal area much as in *indentata* Warr. (1897) or weakly marked *vestita*, but with longitudinal blackish clouding between R³ and M¹ from postmedian to subterminal rather strongly developed, pale mid-terminal patch indicated.—*Hindwing* much as in *decursaria*, but without such sharply blackish shading proximally to the subterminal.

Underside distinctive, especially in the ♂, the dark borders being exceptionally broad; in the ♂ they nearly reach the cell-mark and do not enclose pale terminal spots or band, only narrowing and weakening towards abdominal margin of hindwing, and the space between cell-mark and border on the forewing is more or less suffused (in all the allies clear whitish), in the ♀ it is only slightly less extreme; median line on forewing and antemedian line or band on hindwing also present.

Penang (loc. typ.), April, May, June and November (Curtis), 3 ♂♂ and 1 ♀ in coll. Tring Mus.; Singapore, 4 ♂♂ in coll. Brit. Mus.; Selangor: Bukit Kutu (H. M. Pendlebury), 1 ♂ and 1 ♀ in coll. Federated Malay States Museum; Negri Sembilan: Gunong Angsi, in coll. Raffles Mus. & coll. L. B. Prout; S.W. Sumatra: Barisan Range (Pratt brothers), 2 ♂♂, Lebong Tandai, 1 ♀ in coll. Joicey.

25. *Diplurodes semijubata* sp.n.

♂, 29–33 mm. Antennal ciliation at least twice as long as broadest diameter of shaft. Abdomen with the lateral pencils well developed, fuscous.

Larger than *fimbripedata* Warr. (Nov. Zool. vii. 113), hindtibia simple, midtibia very strongly fringed, the fringe short at distal end, steadily lengthening to become very long at proximal end.—*Forewing* with DC' similarly formed but less extreme; markings stronger and more variegated, a strong dark shade proximal to the subterminal nearly always conspicuous; apex pale; a mid-terminal pale patch as in *exprimata* Walk. (*List Lep. Ins.* xxiii. 764) or usually connected with a tornal one.—*Hindwing* with abdominal flap nearly as in

fimbripedata, termen more regularly shaped; median shade very rarely suffusing with postmedian, the rather large black cell-dot being usually placed on an almost white area; subterminal shading and midterminal pale patch as on forewing.—Underside with the outer dark band not reaching termen, but well developed on both wings.

Malay Peninsula: Bukit Kutu, Selangor, 2,500 ft. (H. M. Pendlebury), the type at light, April 13, 1926, presented to the British Museum, other examples in different collections from the type locality and from Gumong Angsi, Kedah Peak, Taiping, etc.

26. *Synegia (Eugnesia) liparampyx* sp.n.

♂, 33–34 mm.; ♀, 33–38 mm. Head orange, tip of palpus yellow; vertex predominantly bright yellow. Body above orange, clouded with purple-grey, collar-tippets and second segment of abdomen purple-grey; beneath paler. Antenna of ♂ simple, not serrate as in *albibasis* Warr. (1906).

Wings orange, nearly as in *fulvata* Warr. (1906) but with a pale yellow admixture, especially in the median area of the forewing behind the cell-dot, and with grey cloudings recalling those of *commaculata* Warr. (1907) and *correspondens* ab. *concurrans* Warr. (1897) though not quite so solid.—*Forewing* with transverse shades formed nearly as in *fulvata*, the lines themselves, however, somewhat more blackened; a pale spot outside the postmedian between SC^5 and R^3 ; a rather pale apical spot, bounded behind by an oblique dark dash.—*Hindwing* with the antemedian shade indistinct, the macular subterminal rather strong, followed towards termen by a second, irregular series.

Underside paler, with similar markings.

Dutch New Guinea: Mt. Goliath, 5,000–7,000 ft., February 1911 (A. S. Meek), 2 ♂♂, 2 ♀♀, in coll. Tring Mus.

The larger ♀ is of a brighter red, with the dark cloudings intensified and extended, occupying nearly the whole distal area except for the radial and apical spots of the forewing, which are both mixed with reddish. A rather extreme ♀ of this aberration, from Mt. Kunupi, Weyland Mountains, 6,000 ft., November–December 1920, is in the Joicey collection. The aberration may be distinguished as *intensicolor* ab. n.

27. *Synegia (Syntaracta) echmatica* sp.n.

♂, 34–37 mm. In structure similar to *albibasis* Warr. (1906), which it perhaps represents in the Snow Mountains. Abdomen with the same snow-white spot on second tergite, the succeeding tergites with elongate pale-yellow spots, much as in *camptogrammaria* Guen. Colouring about as in *nigrellata* Warr. (1906), but with the orange irroration rather stronger and coarser, the lines a little stronger, less strongly grey-mixed.—*Forewing* with costal edge dark, rather closely spotted with black; cell-dot sharp, not minute; lines widely (5–7 mm.) apart, the accompanying shades rather narrow, postmedian almost direct, finely lunulate-dentate, a conspicuous narrow, very pale yellow band outside it; subterminal about as in *albibasis*, but strongly darkened; terminal line black, interrupted; fringe sharply spotted.—*Hindwing* with antemedian only strong behind the cell; postmedian more distally placed and rather more bent in the middle than in *albibasis*, with blackish spots at the outward angles at radial fold and submedian

interspace; longitudinal shade not broad, a little curved and oblique, starting close to the postmedian at M^1 and ending at termen about R^1 ; termen and fringe as on forewing.—Underside rather paler, the markings greyer.

Snow Mountains, Dutch New Guinea: Upper Setekwa River, 2,000–3,000 ft., September 1910 (A. S. Meek), type: Utakwa River, 3,000 ft., January 1913 (A. F. R. Wollaston); both in coll. Tring Mus. The second specimen must evidently be the one recorded by Rothschild (*Lep. Br. Orn. Un. Exp.* p. 81) as "*Syntaracta clathrata* Warr.," but is quite different in colour from any form of that variable species, has non-pectinate ♂ antenna and is smaller, with several minor distinctions.

28. *Nadagara cryptospila* sp.n.

♀, 39 mm. Head and body pale purplish grey, the head and thorax more or less mixed with cinnamon, the palpus with some dark irroration.

Forewing rather more elongate than in the genotype, the termen rather strongly oblique, scarcely curved, not appreciably waved anteriorly; pale purplish grey, with a vinaceous tinge and with a slight irroration of cinnamon, which becomes strong enough proximally to the postmedian to produce a proximally ill-defined band of that colour; a few scattered dark scales; lines very weak; antemedian a little thickened at an outward angle near costa, otherwise scarcely traceable; postmedian very fine, slightly pale-edged distally, especially at the veins, at first 3 mm. from termen, about R^1 curving to become slightly more oblique than termen, running almost straight to $\frac{3}{5}$ hindmargin; some slight clouding outside the postmedian, developing two dark spots between R^1 and SC^5 and a weaker, more cinnamon one behind R^1 ; fringe concolorous.—*Hindwing* rather elongate costally, apex nearly square, termen almost smooth, very gently rounded; postmedian line continued, little beyond middle of wing, strongest anteriorly, bent close to costa, otherwise almost straight; no other distinct markings.

Underside similarly or rather more brightly coloured, the dark irroration rather stronger; both wings with large black, faintly pale-pupilled cell-dot; forewing in anterior part with a faint line indicating the position of the sub-terminal maculation of upperside, in posterior part with weak indication of the postmedian line; hindwing with a fairly strong postmedian, curved parallel with and about 4 mm. distant from the termen, black-dotted on the veins.

Federated Malay States: Pahang, "Cameron's Highlands," Tanah Ratu, 4,800 ft., October 26, 1923 (H. M. Pendlebury). Type in coll. Brit. Mus., presented by the Federated Malay States Museum.

A damaged pair from Gunong Ijau, Perak, in coll. Tring Mus., the ♂ with only three wings, show that sex to have the hindtibia dilated, with hair-pencil. In that specimen the cinnamon—or even an almost brighter—colour suffuses nearly the whole of the upperside, while the Perak ♀ is intermediate in colouring and has the line rather strongly expressed; both, but notably the ♀, have the cell-marks above rather less weak than in the type.

I have published a survey of this genus in *Insects of Samoa*, iii. (3), 164–7. In the key (pp. 164–5) *cryptospila* can be separated at No. 9 by having the antemedian line obsolescent posteriorly and the cell-dots enlarged beneath. In colouring it is nearer to *juventinaria* Guen., but it is much longer winged, with the postmedian fully as oblique as in *epopsioneura* Prout.

29. *Luxiaria submonstrata celebensis* subsp.n.

♂♀, 34–37 mm. Forewing of ♂ shorter anteriorly and relatively broader than in *s. submonstrata* Walk. (1861), termen appreciably less concave. Hindwing with termen not extremely scalloped, SC² in the only known ♂ separate (in *s. submonstrata* commonly connate). The pale parts appreciably whiter, particularly in the ♂ beneath; the distal white markings on the ♀ underside extended.

Celebes: Ramboekers, Tondano (Weigall), type ♂ and 2 ♀♀; Bonthain, 5,000–7,000 ft., August 1896 (Doherty), 1 ♀; all in coll. Tring Mus.

As *subrasata* is represented in New Guinea by the still more extreme-shaped and darker *inferna* (Warr., 1903, described as *Euippe*), it is possible that all three should be regarded as separate species.

30. *Luxiaria despicata* sp.n.

♂, 28–37 mm. Antenna simple. Hindtibia moderately dilated, the hair-pencil pale.

Wings formed as in the species which passes as *acutaria* Snell. (*vide* Nov. Zool. xxxii. 63¹); considerably smaller; colour light drab or drab grey rather than brown (i.e. coloured like rather weakly-marked *submonstrata*), the greyer band outside the postmedian present or (almost) wanting; cell-mark not or scarcely ocellated; postmedian punctiform, even less curved than in the species named; markings otherwise similar.—*Hindwing* with cell-dot very small, but sharply expressed; postmedian as on forewing.

Underside pale or whitish, with the lines slender, often weak, only exceptionally with a well-developed band outside the postmedian.

♀ similar to the banded ♂♂, or to a washed-out ♀ of *submonstrata*.

Khasis, not uncommon in various collections, the type from Cherrapunji, November 1893, in coll. Tring Mus. Rarer in Sikkim.

Like most of the group, this little species has suffered from misidentifications. Warren called in *hypaphanes* Hmps. or *turpisaria* Walk.; in Swinhoe's collection it stood as *submonstrata*.

¹ Snellen's type, from N. Sumatra, which should be in the collection of the *Natura Artis Magistra*, is unfortunately mislaid, as I am informed by Mr. J. B. Corporaal, who kindly made search for it on my behalf. In Snellen's own collection various species of the group were mixed.